

In the outstanding Office Action, Claims 1-8 were rejected under 35 U.S.C. §112, second paragraph as indefinite; Claims 1, 2, 4, 6 and 8 were rejected under 35 U.S.C. §103(a) as unpatentable over Masumoto et al in view of Applicant's Admitted Prior Art (AAPA); Claim 3 was rejected under 35 U.S.C. §103(a) as unpatentable over Masumoto and AAPA in further view of Takegawa; and Claims 5 and 7 were rejected under 35 U.S.C. §103(a) as unpatentable over Masumoto and AAPA as applied to Claim 1 and further in view of Abe.

Regarding the rejection of Claims 1-8 under 35 U.S.C. §112, second paragraph, the pending claims have been amended in light of the comments noted in the outstanding Office Action and as shown in the marked-up copy. In particular, in Claim 1, "the case" has been amended to be --a case--. Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1, 2, 4, 6 and 8 stand rejected under 35 U.S.C. §103(a) as unpatentable over Matsumoto et al in view of AAPA.

Claim 1 has been amended to recite a male screw member having screw threads disposed on at least a first screw end and a second screw end. Further, the first screw end is threadedly engage with the female screw hole, a portion of the male screw extends through the electrode terminal, and the second screw end is configured to receive a removable fastening member.

For example, as shown in Figure 1 through 7, the male screw member 9 includes a first screw end threadedly engaged with the female screw hole 5, and a second screw end projects from the upper surface of the electrode terminal 3 and is then capable of receiving a removable fastening member 11 (see the fastening nut 11 shown in Figure 2, for example).

The Office Action states Matsumoto discloses a power semiconductor module including a male screw member and cites column 2, lines 19-20. However, as shown in Figures 5 and 6, for example, the male screw associated with the nut does not include a second end which is configured to receive a removable fastening member, as recited in Claim 1. Further, the male screw does not extend through the electrode terminal such that a removable fastening member may be used.

The Office Action also recognizes Matsumoto et al do not disclose the terminal as being electrically connected to an electrode for external connection, but relies on AAPA of Figure 9 as teaching this feature.

However, as shown in AAPA Figure 9, a fastening bolt 89 is fastened to the terminal nut 85 through the electroplate 97 and the electrode terminal 83. (Specification, page 2, lines 10-12). In fact, AAPA teaches away from using a removable fastening member because the fastening bolt 89 includes a head portion that is attached to a thread portion, and therefore does not permit the thread portion to extend so as to receive a removable fastening member.

Therefore, it is respectfully submitted independent Claim 1 and each of the claims depending therefrom are allowable.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Masumoto and AAPA in further view of Takegawa. This rejection is respectfully traversed.

Claim 3 depends on Claim 1, which as discussed is believed to be allowable. Further, it is respectfully submitted Takegawa also does not teach or suggest the features recited in Claim 1. Therefore, it is respectfully requested this rejection also be withdrawn.

Claims 5 and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Masumoto and AAPA as applied to Claim 1 and further in view of Abe. This rejection is respectfully traversed.

Claims 5 and 7 depend on Claim 1, which as discussed above is believed to be allowable. Further, it is respectfully submitted Abe also does not teach or suggest the features recited in independent Claim 1. Therefore, it is respectfully requested this rejection also be withdrawn.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Please amend the claims as follows.

--1. (Amended) A power semiconductor module, comprising: [with a connection structure in which]

at least one electrode terminal each including,

a first [whose one] end [is] connected with an electric power semiconductor device which is resin sealed inside of [the] a case, [is] and

a second end exposed along an outer surface of [a] the case for taking out the at least one electrode terminal from the semiconductor device, and [is] configured to electrically [connected] connect to an electrode [for] thereby forming an external connection disposed on the electrode terminal[,];

[wherein] a female screw hole [for screwing is] and provided on a side of the outer surface of the case[,]; and

a male screw member having screw threads disposed on a first screw end and a second screw end, [formed at its opposite ends with screw threads] said first screw end is threadedly engaged with the female screw hole, and a portion of said male screw extends through the electrode terminal,

wherein said second screw end is configured to receive a removable fastening member.

3. (Amended) The power semiconductor module according to claim 1, wherein said electrode terminal [has] includes said female screw hole.
4. (Amended) The power semiconductor module according to claim 1, wherein said male screw member [has] includes different nominal diameters at opposite ends.
5. (Amended) The power semiconductor module according to claim 1, wherein said male screw member [has] includes threads at opposite ends of which thread directions are opposite from each other.--